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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,349	05/04/2006	Ulrich Brochheuser	GKNG 1264 PCT	5630
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Dickinson Wright PLLC 38525 Woodward Avenue Suite 2000 Bloomfield Hills, MI 48304			EXAMINER WOLFE, DEBRA M	
			ART UNIT	PAPER NUMBER
			3725	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/562,349

Applicant(s)

BROCHHEUSER ET AL.

Examiner

Debra M. Wolfe

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 6-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1, 6 and 8-15 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.



FINAL REJECTION

Claim Objections

Claims 8 and 9 are objected to because of the following informalities: it is suggested to delete "any one of" from line 1 of claims 8 and 9 since these claims only depend from a single claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 6 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Ihara et al (US PGPub 2002/0092168). Applicant's admitted prior art discloses a process of producing an inner profile in a tube or hollow profile comprising the steps of providing a tube or hollow profile having an internal through opening and a constant cross section over the length thereof, inserting the tube or hollow profile into a supporting sleeve and pressing a forming die with an outer profile into the tube or hollow profile from the second end for producing the inner profile [See pg.1 paragraph 2 of Applicant's disclosure]. Applicant's admitted prior art discloses the invention substantially as claimed except for wherein a pressure loaded annular die is placed on a second tube end and is allowed to return under a pressure load in the opposite direction of the pressing in the forming die. However, Ihara et al teaches of placing an annular die (43) on a second end of a hollow profile (Wba) and



allowing the annular die (43) to return under a pressure load (backward extrusion of the material) in the opposite direction to the pressing direction of a forming die (42). It is noted that Ilhara et al states in lines 14-16 of paragraph [0059] that the second end (Wba) is not constrained during the forming operation, therefore the annular die (43) must return in the opposite direction to the pressing movement for the backward extrusion process to be successful. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the prior art process with a pressure loaded annular die that returns under a pressure load in order to evenly control the backward extrusion of the tube or hollow profile.

In reference to claim 6, the pressure load on the annular die (43) is reduced with an increasing return path. It would be inherent to one of ordinary skill in the art that the pressure load acting on the annular die (43) must be reduced with an increasing return path (pressure acting upon the annular die (43) by the second end (Wba)) in order for the inner profile to be formed by the backward extrusion process.

In reference to claim 13, the supporting sleeve is axially longer than the tube or hollow profile.

In reference to claim 14, Ilhara et al teaches the annular die retracts during the step of pressing in response to a backward flow of material.

In reference to claim 15, the combination of the admitted prior art and Ilhara discloses the annular die and pressing die are coaxially arranged.

2. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted prior art in view of Ilhara et al as applied to claims 1 and 6 above, and further in view of Budrean et al (US Patent # 4,785,648). The admitted prior art in view of Ilhara et al discloses the



invention substantially as claimed except for wherein the inner profile is a splined shaft or ball track profile however, Budrean et al teaches the use of pressing dies having a splined outer profiles and ball track profiles for the purpose of forming a splined shaft profile or a ball track profile in a hollow profile or tube. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the outer profile of the pressing die in Ilhara et al to have a splined outer profile as taught by Budrean et al in order to obtain a splined inner shaft profile. It is further noted that Applicant fails to disclose any criticality to the splined shaft profile (see page 6 lines 3-4 of the sixth paragraph).

Pertinent Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent # 2,344,285 to Cormode teaches of allowing a supporting sleeve (annular die *f*) to return based on the pressure load in the opposite direction of the pressing.

Allowable Subject Matter

Claim 7 is allowed since the prior art of record fails to teach or suggest the pressure load on the annular die is reduced in such a way that the sum of an integrated wall friction between the tube or hollow profile and the supporting sleeve in the region of deformation and the pressure load on the annular die remains approximately constant.

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Debra Wolfe whose telephone number is (571) 272-1904. The examiner can normally be reached Monday - Thursday 7am - 4:30pm with alternating Friday 7am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached at (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Debra M Wolfe
Examiner
Art Unit 3725

DERRIS H. BANKS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700